

Background: People with dementia (PwD) want and are recommended to live at home. For this purpose, being physically active is vital. Nevertheless, home-based physical activity programmes for PwD are scarce. The Lifestyle Integrated Functional Exercise for People with Dementia (LiFE4D) might overcome this gap.

Objective: To explore the feasibility and effectiveness of LiFE4D on cognitive function and health-related physical fitness components in PwD.

Methods: A quasi-experimental pilot study was conducted with PwD living at home. The experimental group (EG) received 3-months of individualised home-based physical activity programme (LiFE4D), integrated in everyday tasks with the supervision of carers (when possible). Face-to-face sessions with the health professional were progressively reduced over time (1st month 3x/week, 2nd month 2x/week, 3rd month 1x/week). The control group (CG) continued with usual care (pharmacological treatment). Measures of cognitive function (Addenbrooke's Cognitive Examination-III [ACE-III]) and health-related physical fitness (Brief-Balance Evaluation System Test [Brief-BESTest], Handgrip, 30-Second Sit to Stand Test, 2Minute Step Test, Chair Sit-and-Reach Test [CSR], Functional Reach Test [FRT] and Timed Up and Go test [TUG]) were assessed. Comparisons between mean differences of each group were performed with Kruskal Wallis.

Results: Twelve PwD (8 ♀ (66.7%), 80.7±7.2yrs) were enrolled. Although not significant, improvements were observed in the EG when compared with the CG on ACE-III (4.5 [1.2; 13]; 3 [-7; 7.5] points,  $p=0.810$ ), Brief-BESTest (5.5 [2.8; 6.8]; -2 [-4.5; 2.5] points,  $p=0.126$ ), 30-Second Sit to Stand (2 [0.2; 4.5]; 0 [-1; 0.5] times,  $p=0.162$ ), 2Minute Step Test (29.5 [18.8; 40.2]; -8 [-20; -1.5] times,  $p=0.054$ ), CSR (2 [-5; 6]; -5 [-13; -3.5]cm,  $p=0.081$ ), FRT (4 [2.2; 11]; 0.9 [-5.5; 13]cm,  $p=0.347$ ) and TUG (-2.1 [-9.5; 13]; 0.5 [-4; 11.3] seconds,  $p=1$ ). No adverse events were reported.

Conclusions: LiFE4D seems a promising intervention to delay the decline of cognitive function and health-related physical fitness in PwD living at home and warrants further investigation.

#### PO2.14. Home-based physical activity for people with dementia: A systematic review and meta-analysis

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Background: Home-based physical activity interventions for people with dementia (PwD) are important for this population to live at home. However, the evidence about these interventions is still scattered in the literature.

Objective: To identify and synthesize the effects of home-based physical activity interventions for PwD.

Methods: Electronic and hand search were conducted. Quality of studies was assessed using the Delphi-List. Effect sizes (ES) were calculated with MetaXL 2.0. A meta-analysis was conducted for Mini-Mental Status Examination (MMSE), Neuropsychiatric Inventory, Cornell Scale for Depression in Dementia, Alzheimer's Disease Cooperative Study Group Activities of Daily Living Scale (ADCS-ADL), Functional Reach test, Timed Up and Go test, Short Physical Performance Battery, Dementia Quality of Life, Neuropsychiatric Inventory caregivers and Zarit Burden Interview.

Results: Sixteen randomised controlled trials were included, with most being of high quality and published after 2015. Large heterogeneity of intervention length (2 months to 2 years), frequency (daily to 4-6 times bimonthly) and session duration (20-30 minutes to 12 hours) was found. Medium to large ES were found in cognitive function, changes in Behavioural and Psychological Symptoms of Dementia (BPSD), activities of daily living, health-related physical fitness, physical activity, falls, health-related quality of life and carer's burden. Significant results in Meta-analysis, favouring home-based physical activity intervention, were showed for MMSE (ES=0.71, 95%CI 0.43, 0.99), Neuropsychiatric Inventory (ES=-0.37, 95%CI -0.57, -0.17), ADCS-ADL (ES=0.80,

95%CI 0.53, 1.07), Functional Reach test (ES=2.24, 95%CI 1.80, 2.68), Timed Up and Go test (ES=-2.40, 95%CI -2.84, -1.96), Neuropsychiatric Inventory caregivers (ES=-0.63, 95%CI -0.94, -0.32) and Zarit Burden Interview (ES=-0.45, 95%CI -0.77, -0.13). Few minor adverse events and high adherence to intervention were reported.

Conclusions: Home-based physical activity interventions seem safe and effective in delaying cognitive function decline and improving changes in BPSD, activities of daily living, health-related physical fitness and carer's burden in people with dementia.

#### **PO2.15. Between “Badantaggio” and “Sindrome Italia”: The Optimus Domi experience in the field of care**

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The word “badante” (typically used in Italy) moves away from a correct representation of the figure it intends to describe, since this term does not explain the social importance of this work, nor considers the human dimension related to it. This is an “another kind of welfare”, developed in the last years following changes in the social dimension, habits and family commitments and the increase of the population average age.

From Italian statistics, at the end of 2017, home workers regularly employed by Italian families were about 865.000 (including housekeepers and badanti). More than 7% of Italian elders over 65 years are assisted by a badante and this percentage increases in Northern regions, where the ratio becomes 10%. It's the most diffused type of care, after the family one.

One of the most important topic is the so called “Sindrome Italia”, highlighted by recent studies that pointed out a huge number of “badanti” who needed psychiatric cure once returned in their country of origin (basically Romania).

This “mal d'Italia” could be the result of complex situations due to multiple factors (lack of concrete perspectives of change, distance from their families, difficulty in being recognised by employers as a person and being enhanced for their skills). This issue also appears to be intimately related to the Burnout syndrome.

In the presented study, risk and protective factors in health care professions will be analysed.

Moreover, the contribute of the Optimus Domi model - an Italian home care model developed for about 20 years - will be presented. In particular, the work of Tutoring with Family caregivers will be analysed, as a tool that promotes the protective factors, intercepts and manages the burnout risk factors in the daily work.

#### **PO2.16. Adaption of the “EAT-HC” for German long-term care - First results of content validity and feasibility testing**

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Background: The influence of the environment in dementia-specific care has been known for several years. A well-designed living unit in long-term care can help to maintain remaining abilities longer and thus positively influence the quality of life of people with dementia. So far, there is no valid instrument with which the quality of the physical environment in long-term care facilities can be systematically assessed. For this reason, the Australian Environmental Audit Tool – High Care (EAT-HC), developed by Fleming and Bennett (2015), was translated into German, linguistically validated and culturally adapted in a multi-step process according to the WHO (1998).